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current from an APIT-85 three-phase generator having a capacity of 7.5 kilowatts at 1,500 revolutions per minute. The D-182A measures 3,900 x 7,500 x 3,000 millimeters, and has a tread of 7,250 millimeters. It weighs 9,000 kilograms.

The D-195A machine is the last to ride over the paving, cutting the seams in it and giving it its final dressing. The cutting is done by two movable metal blades, one mounted on the frame transversely, the other longitudinally. Each is equipped with an I-7 vibrator, both taking power from the generator on the D-182A. Workers standing on the frame operate the cutting blades and put the finishing touches on the concrete, measuring it with special gages, and smoothing it out where necessary with hand tools. The entire machine is moved along the rail forms by hand a little at a time as successive sections of the road are processed.

The last machine of the aggregate is a trailer to be used to transport the above three heavy machines.

Productivity of the machines in cubic meters follows:

	<u>D-181A</u>	<u>D-182A</u>	<u>D-195A</u>
During a 9-10 hr period			
Road 20 cm deep			
Average productivity	228	243	120 (8 hr period)
Maximum "	240	309	178 " " "
Road 40 cm deep			
Average productivity	254	258	--
Maximum "	268	314	--
During 1 hr			
Road 20 cm deep			
Optimum performance, no stops	30.8	39.9	35.5
Normal performance	22.9-28.2	25.4-36.0	14.2
Road 40 cm deep			
Optimum performance, no stops	34.4	40.5	--
Normal performance	19.5-20.4	18.5-25.4	--

PLAN TO PUT OUT NEW SPREADER

Mekhanizatsiya Stroitel'stva, Dec 50

A new concrete spreader, the D-227, is slated for production in 1951. It will move forward on rail forms, while a pair of endless worm conveyers, connected at the middle of the machine and extending outward to the sides, will pass over piles of concrete previously placed in the middle of the roadbed, and spread them out over it. The machine will move forward at a rate of 1.16-3.82 meters per minute, and should be able to spread out a strip of concrete 500 meters long, 7 meters broad, and 0.20-0.23 meter deep in one shift.

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MACHINE DIGS BEDS FOR CONCRETE ROADS

Mekhanizatsiya Stroitel'stva, Dec 50

The Ministry of Construction- and Road-Machine Building has developed a new roadbed digger, the D-239. Mounted on a heavy frame, it rides along the same rail forms which are later used by the spreading and finishing machines. A milling drum, one meter in diameter, at the front of the machine digs the earth to the required depth and an inclined blade to the rear of the drum picks it up. A conveyer runs along behind this, carrying the earth off to the side of the machine. The machine digs up a 7-meter-broad strip of previously rolled earth to a depth of 20 centimeters below the base of the rail forms. Powered by a 52-horsepower 1-MA motor, it moves along at 1.0-2.0 meters per minute and has a productivity of 60-80 cubic meters of earth per hour. It weighs 9.5 tons.

TEST BITUMEN SPREADER

Mekhanizatsiya Stroitel'stva, Dec 50

Tests were recently run on the D-251 bitumen spreader, designed and built at the Kurgansk Road-Machine Plant. Mounted on a ZIS-150 truck body, it is designed to handle bitumen and tars for repairing and covering secondary roads. The pump is run from the truck engine.

The tank holds 3,600 litres of paving material and sprays the mixture in a band 1-7 meters broad. The mixture is heated by a kerosene burner, via tubes which pass through the bitumen tank.

Although the machine performed satisfactorily on tests, several small changes will be made in its design before it goes into series production.

NEW PLOW PRODUCED IN PLACE OF OLD

Mekhanizatsiya Stroitel'stva, Dec 50

The Shcherbakov Road-Machinery Plant of the Ministry of Construction and Road-Machine Building is substituting the production of the new D-229 snow-plow for that of the older D-151. Mounted on a ZIS-150 truck, the plow is designed for clearing roads covered to a depth of 25-30 centimeters while moving at speeds of up to 30-35 kilometers per hour.

In addition to the main moldboard, mounted forward, there is a smaller one, called a side wing, mounted on the right side of the truck. Both moldboard and side wing are raised and lowered by a hydraulic system which is powered by a D-169 hand pump located in the operator's cab.

Put through tests in 1949 - 1950, the machine performed satisfactorily in clearing automobile roads, and was able to break through drifts of up to 1.2 meters high. At a speed of 30 kilometers per hour, the forward moldboard threw the snow off 2 meters to the side.

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Following are specifications of the plow:

Clearance width, using moldboard only (mm)	2,620
" " " " and side wing (mm)	4,200
Length of blade, moldboard (mm)	3,200
Height of leading end of moldboard (mm)	600
" " trailing " " " (mm)	1,200
Horizontal-plane angle between the line of the road and the moldboard (deg)	55
Vertical-plane angle between the road surface and moldboard blade (deg)	45-60
Maximum height to which moldboard can be raised above road (mm)	300
Length of side wing (mm)	2,750
Height of leading end of side wing (mm)	500
" " trailing " " " (mm)	700
Horizontal-plane angle between side wing and line of road (deg)	up to 45
Vertical-plane angle between road surface and side-wing blade (deg)	30
Height to which side wing can be raised above road (mm)	960
Over-all weight of plow aggregate, exclusive of truck (kg)	1,000
Maximum pressure exerted by hydraulic system (atm)	150
Volume of hydraulic system (l)	6.5

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